

# Open Science Grid

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April 12<sup>th</sup> 2005

The Open Science Grid Consortium includes contributions from many projects and stakeholders. High level deliverables and milestones are negotiated in the Consortium Council, Technical Groups and Activities.

The Consortium Interim Executive Board and Council have been formed. The next face to face meeting will be in Madison, May 3<sup>rd</sup>. There are currently about 22 members of the council and interim executive board.

<http://opensciencegrid.org/events/meetings/osgcouncil050305/index.html>

The next Consortium meeting is planned in July at the University of Wisconsin, Milwaukee, hosted by the LIGO group.

Within the scope of the GDM the Open Science Grid Activity provides coordination and organizational infrastructure in support of the contributions from other Fermilab projects and stakeholders in the consortium.

## 1.1. *Project Drivers & Scope*

COMMON	Fermilab Computing and Strategic Storage resources accessible to Open Science Grid
COMMON	Common and/or interoperable Services with OSG and LCG
D0	Use of OSG/LCG/Fermigrid resources
CDF	Use of OSG/LCG/Fermigrid resources
CMS	Tier-1Grid resources access (subject to policy) from OSG & LCG
CMS	DC06 CMS 20% Data Challenge
CMS	DC07 CMS 50% Data Challenge
CMS	MCPS using Tier-2 and OSG resources
Astro	SDSS processing and analysis

## 1.2. *Project Milestones and Current work*

### 1. Spring 2005 Open Science Grid Deployment

The scope of the OSG Spring deployment is given in

[http://computing.fnal.gov/docdb/osg\\_documents/0000/000028/005/OSG-Deployment-Activity-v.9.2.pdf](http://computing.fnal.gov/docdb/osg_documents/0000/000028/005/OSG-Deployment-Activity-v.9.2.pdf)

The OSG Integration Activity has shown significant progress in organizing the testbed and defining and accepting readiness activities from the contributors. The integration testbed has 20 sites. Many Grid3 sites are planning to migrate to OSG once the software release is final. <http://osg.ivdgl.org/twiki/bin/view/Integration/>

Milestones to deliver to OSG Deployment are included in the Upper Storage, VO-Privilege, FermiGrid and US CMS S&C projects. VO administrators at Fermilab and BNL use VOMRS. Other VO administrators are evaluating it at this time.

Operation and support of the Open Science Grid will be ongoing after it is deployed.

## **2. Open Science Grid Consortium**

There are regular (weekly or bi-weekly) home meetings of the OSG Technical Groups and/or Activities. Chairs are responsible for arranging these meetings, publishing minutes and reporting at the Deployment and Consortium meetings. The OSG Document Database is used to keep documents and presentations. Documentation is also kept on the OSG web site and Twiki.

The Open Science Grid has a important component of Outreach, Communication and Education. The NSF has recently funded a full time Grid Coordinator, resident in Fermilab Public Affairs, who will be working with OSG and visiting many of the Universities and other Laboratories active in the US physics and science grid efforts.

The Fermilab education office is involved in defining the future program of work for bringing scientific grid based applications to the classroom.

A important part of the OSG is partnership with the LCG, EGEE and TeraGrid. Recent activities have been Dane's talk at GlobusWorld and Ruth's participation in the TeraGrid all hands meeting. Markus Schultz (LCG/EGEE Deployment) and Massimo Lammana (ARDA) will attend upcoming OSG meetings.

## **3. Incremental and Fall 2005 OSG Release.**

There will be incremental releases of the OSG infrastructure after initial deployment. We expect more support for managed storage, new components from the US contributions, LCG and EGEE/gLITE. New middleware components from Globus GT4 (GridFTP, GRAM) and Condor (Condor-C) will be tested and released.

The scope and deliverables for a major release in the fall of 2005 will be negotiated by the stakeholders – Council and Executive Board members – based on the experience of the initial deployment and the drivers and requirements of the contributors.

### **1.3. Effort**

Dane Skow	PPDG Common Project Coordination Co-Chair- of OSG Provisioning and Deployment, member of Council	.5 FTE	PPDG funded.
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Ruth Pordes	OSG Coordination, Co-chair of Deployment, member of Interim Executive Board	.5 FTE	. PPDG funded
Mari Herera, Penelope Constanta	OSG web pages, document database, meeting and organization infrastructure support	.25 FTE	Hepic funded
Rob Kennedy	Upper Storage contributions to OSG. Co-chair of OSG Storage Technical Group		As reported in Upper Storage
Ian Fisk, John Weigand, Vijay Sehkri, Vikram Andem	VO Privilege for OSG		As reported by US CMS S&C.
Keith Chadwick, Steve Timm, Dan Yocum	FermiGrid / OSG Interface		As reported in FermiGrid
Philippe Canal Sudhir Borra	Grid Accounting for OSG		Ramping up – need to understand what is OSG specific
Don Petravick	Networks.Co-chair OSG Networks, member of Council		
Adam Walters, Lisa Giacchetti	Support Centers and Operations		
Lothar Bauerdick, Amber Boehnleing, Ashutosh Kotwal, Vicky White	Members of OSG Council		
Many	US CMS S&C		

## **1.4. Risks**

### **1.4.1. Short term Risks:**

The OSG Spring Milestone for deployment of the new services has slipped because of several reasons, including:

- 1) New components in VDT needing integration and testing.
- 2) Access to Managed Storage and Role-based Authorization due to lack of effort.  
Grid accessible Managed Storage: There is no viable technology supported for wide distribution on the scale of OSG.
- 3) VO Privilege Project Prima component: Author has left/is leaving and ramp up of new effort to become the expert support is just starting.
- 4) General Information Providers (GIP) in common with LCG waiting for Condor fixes and packaging in VDT.

Once OSG is deployed there will be a support load for the software and service providers as well as for the administrators of resources. This is expected to be in line with current efforts.

#### **1.4.2. Long Term Risks:**

Reliance on Grid infrastructure for the next decade requires

Maintaining and sustaining the Middleware - Condor, Globus, SRM, VDT - This needs funding!

Operations is a key part of a shared broad infrastructure - This needs funding!

OSG Council and Executive Board does not have the time to ensure that their contributions match the deliverables and expectations they are generating and agreeing to.

We will have a resource constrained situation where economics drive resource owners to withdraw from sharing and common infrastructure.